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SERIAL NUMBER	FILING DATE	FIRST NAMED APPLICANT	ATTORNEY DOCKET NO.
08/366,009	12/29/94	EYLES	D DR232.I

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E3M1/0730

DOWNS, IEXAMINER	
ART UNIT	PAPER NUMBER
2309	19

DATE MAILED:

07/30/96

Please find below a communication from the EXAMINER in charge of this application.

Commissioner of Patents

see attached Office action.

Office Action Summary

Application No.
08/366,009

Applicant(s)
EYLES

Examiner
Robert W. Downs

Group Art Unit
2309



☒ Responsive to communication(s) filed on May 17, 1996

☒ This action is **FINAL**.

☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

A shortened statutory period for response to this action is set to expire 3 month(s), or thirty days, whichever is longer, from the mailing date of this communication. Failure to respond within the period for response will cause the application to become abandoned. (35 U.S.C. § 133). Extensions of time may be obtained under the provisions of 37 CFR 1.136(a).

Disposition of Claims

☒ Claim(s) 1-25 is/are pending in the application.

Of the above, claim(s) _____ is/are withdrawn from consideration.

☐ Claim(s) _____ is/are allowed.

☒ Claim(s) 1-25 is/are rejected.

☐ Claim(s) _____ is/are objected to.

☐ Claims _____ are subject to restriction or election requirement.

Application Papers

☐ See the attached Notice of Draftsperson's Patent Drawing Review, PTO-948.

☐ The drawing(s) filed on _____ is/are objected to by the Examiner.

☐ The proposed drawing correction, filed on _____ is ☐ approved ☐ disapproved.

☐ The specification is objected to by the Examiner.

☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. § 119

☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d).

☐ All ☐ Some* ☐ None of the CERTIFIED copies of the priority documents have been
☐ received.

☐ received in Application No. (Series Code/Serial Number) _____.

☐ received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

*Certified copies not received: _____

☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

Attachment(s)

☒ Notice of References Cited, PTO-892

☐ Information Disclosure Statement(s), PTO-1449, Paper No(s). _____

☐ Interview Summary, PTO-413

☐ Notice of Draftsperson's Patent Drawing Review, PTO-948

☐ Notice of Informal Patent Application, PTO-152

--- SEE OFFICE ACTION ON THE FOLLOWING PAGES ---

Art Unit: 2309

1. The disclosure stands objected to because the computer programs in appendix A and B, are partially illegible and should be replaced with clean copies. Appropriate correction is required.

2. The rejection of claim 4 under 35 U.S.C. § 112, second paragraph, is **withdrawn**.

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --
(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1-25 **stand** rejected under 35 U.S.C. § 102(b) as being anticipated by Perkins et al., "Adding Temporal Reasoning to Expert-System-Building Environments (February 1990), for the same reasons found in the Office action mailed November 28, 1995.

The applicant's arguments concerning the type of processing taught in the Perkins reference are not persuasive. In summary, applicant's argue that the Perkins reference refers to an IF-THEN structure that requires a loop to be programmed, comparable to conventional IF-THEN statements. The examiner cannot concur. "IF-THEN rules" in expert systems are not the same as "IF-THEN

Art Unit: 2309

structures" found in conventional programming languages. Thus, contrary to the applicant's argument, the WHEN-THEN structures in Perkins are not the same as the IF-THEN structures found in conventional programming languages. The WHEN-THEN structures that are entered into the LES shell of Perkins are declarative knowledge structures that are generally autonomous, self-standing entities. Control of execution of the WHEN-THEN structures is conducted by a separate inference engine that provides the automatic evaluation. Further, controlling of execution of the WHEN-THEN rules does not require entering a control loop to recursively evaluate the rules. It is in the conventional languages like COBOL, C, and BASIC, that the IF-THEN structures are positioned relative to each other in a program, are a procedural element of a program, are not independent, and do not represent declarative knowledge.

For further background on the subject, Chapter 3 of Ken Pedersen, Expert Systems Programming, Wiley (1989), provides an introduction to expert systems and compares IF-THEN rules to conventional IF-THEN structures. Pedersen points out where IF-THEN rules are not IF-THEN structures in conventional programming languages (see pages 46-47, "Rules Are Your Reasoning Building Blocks"). IF-THEN rules make up the knowledge base in an expert system (see page 40). Pedersen teaches that unlike conventional IF-THEN structures, IF-THEN rules are independent units that are

Art Unit: 2309

not procedurally linked to other rules. The IF-THEN rules are not procedural statements in a program, but are knowledge about a particular domain. Pedersen points out where an expert system shell includes a user interface and an inference engine, and only the knowledge base of IF-THEN rules has to be added. The inference engine is already programmed and controls execution of the rules. Thus, there is no need to program a loop to recursively evaluate rules.

5. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 C.F.R. § 1.136(a).

A SHORTENED STATUTORY PERIOD FOR RESPONSE TO THIS FINAL ACTION IS SET TO EXPIRE THREE MONTHS FROM THE DATE OF THIS ACTION. IN THE EVENT A FIRST RESPONSE IS FILED WITHIN TWO MONTHS OF THE MAILING DATE OF THIS FINAL ACTION AND THE ADVISORY ACTION IS NOT MAILED UNTIL AFTER THE END OF THE THREE-MONTH SHORTENED STATUTORY PERIOD, THEN THE SHORTENED STATUTORY PERIOD WILL EXPIRE ON THE DATE THE ADVISORY ACTION IS MAILED, AND ANY EXTENSION FEE PURSUANT TO 37 C.F.R. § 1.136(a) WILL BE CALCULATED FROM THE MAILING DATE OF THE ADVISORY ACTION. IN NO EVENT WILL THE STATUTORY PERIOD FOR RESPONSE EXPIRE LATER THAN SIX MONTHS FROM THE DATE OF THIS FINAL ACTION.

Serial Number: 08/366,009

-5-

Art Unit: 2309

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Robert Downs whose telephone number is (703) 305-9642.

RWD
July 26, 1996

Robert W. Downs

**ROBERT W. DOWNS
PRIMARY EXAMINER
GROUP 2300**